

An Overview of the Separation Phenomenon and the Experience of Hospitalization for Children

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Abstract

When children are psychologically bonded to a caretaking adult they experience a characteristic spectrum of emotions and behaviors upon being separated from that attachment figure. This paper reviews the literature pertaining to the separation phenomenon and the emotional experience of hospitalization for children in an attempt to integrate this knowledge into the diagnosis and treatment of children hospitalized medically and psychiatrically.

Placing children in the hospital is an event which impacts emotionally on children, their parents, and their physicians. A large body of information exists in psychiatric, pediatric, and nursing literature addressing the effect of hospitalization on children and their experience of separation from primary attachment figures (1-15). Unfortunately, relatively little attention has been focused on the phenomenon of separation as experienced by a child who is a psychiatric inpatient (16). This article will provide an overview of the separation phenomenon and the psychological impact of hospitalization on children as well as recent psychobiological research relating to separation. The goal will be to increase awareness of this childhood experience and facilitate the incorporation of this information into the evaluation and treatment of child psychiatric inpatients.

The phenomenon of separation is classically described by John Bowlby in his three volume work, *Attachment and Loss* (17). He likens the process of separation to mourning and clusters the characteristic responses into three phases: protest, despair, and detachment. The protest phase can last from a few hours to a week or more. It is characterized by acute distress in which children seek to recapture their attachment figures, most often parents, by loud crying, shaking and eager hyperalertness. Children quickly turn to any possible cue that might indicate the return of their attachment figures. These behaviors appear to be instinctive and may include aggressiveness. For example, a preschool child left with a babysitter may bite or hit the sitter provoked only by the sitter entering the same room and attempting to comfort the child. The despair phase succeeds protest and is characterized by quiet disorganization. Children continue to miss their attachment figures but appear hopeless. Crying is monotonous and intermittent. Behavior is withdrawn and hypoactive.

Despair is followed by the detachment phase which can begin within 2-3 weeks.

Children show more interest in their surroundings and appear to have lost interest in their attachment figures. Upon visitation with their attachment figures, there is an observable absence of attachment behavior such as smiling or crying. Bowlby speculated that this represents repression and may impact on long-term interpersonal relationships and personality.

Bowlby's description of the separation phenomenon is based on his observations of 6 month to 5 year olds, an age group with limited representation in the inpatient child psychiatric population. However, in this author's experience, many school-aged children who require psychiatric hospitalization are developmentally delayed or functionally regressed to preschool psychological levels.

The psychological impact of hospitalization on children was first addressed in the 1940's. Rene Spitz described a depression which occurred as the result of the absence of an object of emotional dependence, anaclitic depression, in foundling home infants. He initiated the concept of "maternal deprivation" as a phenomenon detrimental to survival (18). Leading theorists postulated that the threat of loss of "mother" was the source of separation anxiety (1,19).

Robertson, in collaboration with Bowlby, was one of the first researchers to study young children in hospitals from a psychologic viewpoint (13,20). In the mid 1960's, Vernon et al compiled a review of the studies done by Robertson and others exploring the psychological impact of hospitalization on children (2). Vernon's group coined the term "psychological upset" for the negative changes observed in children's behavior during and following hospitalization. Psychological upset included behavioral regression, symptoms of depression, aggression, phobias, tics, enuresis, and encopresis. They organized the information obtained in their review by determinants of psychological upset. In adherence to this organizational strategy, a brief overview of the literature follows.

Unfamiliarity with the hospital setting was identified as a determinant of upset that could be directly addressed by psychological preparation prior to admission (2). Interestingly, the impact of preparation primarily influenced the intensity of post-hospital symptomatology (3). Environmental manipulations such as bringing familiar objects and pictures to the hospital appeared to be helpful. The experiential factor of previous hospitalizations or separations decreased upset as well (3).

Parent-child relationships prior to hospitalization influenced the psychological upset phenomenon in that well adjusted, intelligent children who enjoyed good relationships with their parents were less likely to experience upset (2). The effect of emotional responses of parents to hospitalization was unclear, although a high level of anxiety in parents was correlated with anxiety in their children (3). More recently, researchers observed that children's ego development or coping style reflect in their patterns of coping in the hospital (4,5). Children who primarily use the defense mechanism of intellectualization need more details, while children who use denial need more nurturance and less information (3).

Interpersonal relationships during hospitalization and sensory-motor restrictions had little to no impact on the existence of psychological upset (3). The sex of a child did not qualify as a significant determinant of psychological upset (3). Nonethe-

less, several authors noted a sex difference in response to hospitalization in that boys most often make physical attempts to control the environment while girls use verbal and observational skills to effect control (6,7). Social status was noted to be related to psychological distress in only one study where forty hospitalized children of non-rooming-in parents were assessed (14). Children from two-parent families and middle social status exhibited more regressive behaviors, including crying, physical abuse, and protest, than children from single-parent families and low social status (14).

Age and separation from parents were the most clear determinants of psychological upset as Bowlby might have predicted, with preschool age children (6 months to 4 years) having more dramatic regressive behaviors and emotional disturbance than children of other age groups (8). Preschoolers do not have the cognitive development to understand the reasons for hospitalization and the temporary nature of the stay.

The predominance of separation as a determinant for psychological upset was most evident in the decrease of psychological upset that occurred when children had contact with their parents during the hospitalization (2). When parents were allowed to room-in, children demonstrated positive psychological growth one month after hospitalization (9) and had less frequent post-operative complications (10). If children remained in the protest or despair phase rather than proceeding to detachment, they tended to readjust rapidly upon return home. Detachment was reflected in the severity and persistence of continued psychological upset post-hospitalization (3).

Kim et al recently performed a pilot study of 22 psychiatrically hospitalized children assessing their separation reactions with a rating scale developed specifically to quantify the separation phenomenon (16). They found separation reactions to be greater in the psychotic and anxious/depressed children than in any other diagnostic group, and the least in conduct disordered children (16). Children with developmental disorders also exhibited a greater degree of separation reaction (16). They suggested that the intensity of the separation reaction may provide information useful for the differential diagnosis of hospitalized children (16).

Physical and psychological effects of separation present a challenge to researchers attempting to understand their mechanisms. During the twenty years since Bowlby's description of separation phenomenon in children, psychobiologists have developed physiologic human and animal models of the separation phenomenon. The well-known Harlow monkey experiments were the first to demonstrate poor social skills and increased mortality associated with early separation experiences (21). Ainsworth's "strange situation" became the classic laboratory paradigm for brief separation in human infants (22).

Behaviorally, separation in human and monkey infants is a biphasic process characterized first by agitated behavior and subsequently by depression (23,24). Field and Reite studied children separated from their mothers for several days and found that agitated behavior and physiologic changes occurred immediately following separation with increased negative affect, activity level, heart rate, nightwakings, and crying (23). Upon mother's return, these parameters decreased (23). Similarly, Reite

et al studied infant monkeys immediately following separation (24). They exhibited an agitation reaction with increased motor activity and frequent distress vocalizations, as well as physiologic changes, such as increased heart rate and body temperature (24). This agitation reaction was followed by a period of depressed behavior most often accompanied by decreased heart rate and body temperature, increased incidence of cardiac arrhythmias, and marked disturbances in sleep patterns (24).

Several neurochemical systems appear to participate in the psychobiology of the separation phenomenon. Panksepp et al developed models of the separation phenomenon associated with the opiate system in chicks, guinea pigs, and dogs (25). Having observed narcotic withdrawal in these animals to be similar to the physiologic changes associated with the severance of social bonds, they demonstrated an alleviation of separation distress with opiate receptor agonists (25). Concurrently, opiate receptor blockade with naloxone increased separation-induced vocalizations (25). Brain circuits responsible for separation distress vocalizations in the chick and guinea pig are high in opiate receptors (25).

Implications for the catecholamine system's contribution to the separation phenomenon are found in the work of McKinney et al who demonstrated an association between increased despair and lower cerebral spinal fluid (CSF) norepinephrine in monkeys experiencing separation (26). Similarly, ameliorated despair was associated with increased CSF norepinephrine. They also found that behavioral responses to separation were alleviated by imipramine and low doses of alcohol (26).

The hypothalamic pituitary adrenal (HPA) neuroendocrinologic axis has been identified as significant in the separation phenomenon as well (27). Coe et al monitored physiologic parameters of the agitation phase in the squirrel monkey (27). The behavioral response of distress vocalizations decreases across the separation period, while cortisol levels increase (27). These researchers postulate that a decline in distress vocalizations may reflect an active psychoendocrine process that is acutely adaptive. However, prolonged cortisol elevation induced by sustained separations can adversely affect the immune system (27).

A Russian researcher, D'iachkova, has looked at the physiologic effects of hospitalization on children (15). Ninety-seven children hospitalized for hernia repair surgery underwent cardiac monitoring and emotional assessment. He concluded that the negative emotions experienced by children while in the hospital produce considerable changes in cardiac rhythm regulation and increased sympathetic tone. When age groups were compared, sympathetic tone was noted to increase with age (15).

The implications of this psychobiological research for hospitalized children are speculative at best. Although Vernon's review of hospitalization for children concluded that psychological upset is unlikely to have long term consequences for emotional adjustment (2), it is concerning to consider the possibility of permanent alterations of the immune system and significant neurochemical systems that may occur with separation as indicated by psychobiological research (23-27). On a more positive note, two studies have demonstrated that 10 to 25% of hospitalized children actually improve psychologically, gaining a sense of mastery, competence and improved self-esteem (11,12). As professionals who hospitalize children we continually

encounter the task of integrating new data, such as this psychobiologic information, into our existing schema for making recommendations to parents. As psychiatrists who may hospitalize children to diagnose and treat emotional and behavioral disorders, it is essential for us to consider the possible impact of the separation phenomenon—emotionally, behaviorally, and physiologically—on these children and incorporate this information into our evaluations and our recommendations to parents. A recent study of psychiatrically hospitalized children who have panic disorder serves to underscore this need to consider the impact of separation, and hospitalization itself, on our assessments (28). The authors reasoned that children with panic disorder may be misdiagnosed as conduct disorder or “borderline regression” in hospital settings (28). The rating scale developed by Kim et al may prove to be a useful tool in clarifying psychiatric diagnoses versus separation phenomenon (16). Hopefully, as our awareness of children’s separation and hospitalization experiences increases we will become more clear in our diagnoses and more effective in our treatments.

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